

AMENDMENT TO THE CLAIMS

1. (canceled)

2. (canceled)

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19. (canceled)
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21. (canceled)
22. (canceled)
23. (canceled)
24. (canceled)
25. (currently amended): A mobility assist device, comprising:
 - a mobile body configured for travel over a surface;
 - a location system configured to generate ~~providing~~ a location signal indicative of a location of the a mobile body;
 - a data storage system storing object information indicative of locations of real world objects ~~located in a plurality of locations;~~
 - ~~a display system; and~~
 - a controller configured to generate a display signal based on receive the location signal, ~~and retrieve the object information and a location of an operator of the mobile body based on the location signal and provide a display signal to the display system such that the display system displays objects in substantially a correct perspective of an observer located at the location of the mobile body; and~~

a display attached to the mobile body and configured to generate virtual images of the real world objects based on the display signal.

26. (currently amended): The mobility assist device of claim 25 wherein the display ~~system~~ is configured to provide a conformal augmented display of the objects based on the display signal.

27. (currently amended): The mobility assist device of claim 25 wherein the display is positioned in a field of view of the operator and the display presents the virtual images such that, when viewed from the perspective of the operator, the virtual images appear to be projected on the corresponding real world objects. ~~the controller provides the display signal such that the objects are displayed at a position in a field of view of the observer at a location which substantially overlies the actual objects in the field of view.~~

28. (currently amended): The mobility assist device of claim ~~26~~ 27 wherein the display ~~system~~ comprises:

a projection system providing a projection of the virtual images ~~an image of the objects~~; and

a partially reflective, partially transmissive, screen, positioned in the field of view of the observer of the mobile body ~~the observer and positioned to receive the projection to allow the observer to see through the screen and to see the image of the objects projected thereon.~~

29. (currently amended): The mobility assist device of claim 25, wherein: ~~and further comprising:~~

the device further comprises a ranging system, ~~coupled to the controller and configured to generate a detection~~

signal that is indicative of a location of ~~detect~~
~~transitory objects and provide a detection signal to~~
~~the controller indicative of the location of the~~
~~transitory object relative to the mobile body;~~ and
the controller is configured to generate the display signal
based on the detection signal.

30. (currently amended): The mobility assist device of claim 29
~~wherein the controller is further configured to provide the~~
~~display signal, based at least in part on the detection signal,~~
~~such that the display system~~ is configured to displays virtual
images representing the transitory objects in response to the
display signal ~~in substantially a correct perspective of an~~
~~observer located at the location of the mobile body.~~

31. (currently amended): The mobility assist device of claim 25
wherein the controller is configured to filter the display signal
~~such that the display system displays only transitory objects~~
based on operator-selected criteria.

32. (currently amended): The mobility assist device of claim 30,
25 wherein the controller is configured to filter the display
signal such that the display ~~system displays only presents~~
virtual images representing transitory objects and real world
objects ~~selected objects indicated by the object information that~~
have been selected for display based on the operator-selected
criteria.

33. (currently amended): The mobility assist device of claim 25,
wherein and further comprising:

the device further comprises a mobile body orientation
detection system configured to generate an orientation
signal that is indicative of, ~~coupled to the controller~~

~~and the mobile body, detecting an orientation of the mobile body and providing an orientation signal to the controller.; and~~
the controller is configured to generate the display signal based on the orientation signal.

34. (currently amended): The mobility assist device of claim 27,
~~25 wherein the observer comprises a human with a head and further comprising:~~

the device further comprises a head orientation tracking system configured to generate a head orientation signal that is indicative of an orientation of the head of the operator,
~~coupled to the controller, detecting an orientation of the observer's head and providing a head orientation signal to the controller.; and~~
the controller is configured to generate the display signal based on the head orientation signal.

35. (canceled)

36. (currently amended): The mobility assist device of claim 25
wherein the display system comprises a device selected from the group consisting of a helmet-mounted display system.; a visor-mounted display; an eyeglass-mounted display; and a liquid crystal display.

37. (canceled)

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49. (new): The mobility assist device of claim 25, wherein the display signal is further based on a location of the display relative to the mobile body.

50. (new): The mobility assist device of claim 25, wherein the object information includes information indicative of locations of first and second boundaries of a path.

51. (new): The mobility assist device of claim 50, wherein the display is configured to generate virtual images of the first and second boundaries of the path on the display signal such that, when viewed from the perspective of the operator of the mobile body, the virtual images of the first and second boundaries appear to be projected on the corresponding real world first and second boundaries of the path.

52. (new): The mobility assist device of claim 51, wherein the first and second boundaries of the path correspond to right and left lane boundaries of a lane of a road.

53. (new): The mobility assist device of claim 25, wherein the mobile body comprises the operator.

54. (new): A mobility assist device, comprising:
a mobile body configured for travel over a surface;
a location system configured to generate a location signal indicative of a location of the mobile body;
a data storage system storing object information indicative of locations of real world objects;
a display attached to the mobile body and configured to generate virtual images of the real world objects based on a display signal; and
a controller configured to generate the display signal based on the location signal, the object information and a location of the display.

55. (new): The mobility assist device of claim 54, wherein the display is configured to present the virtual images in such a manner as to generate a visual effect of the virtual images being projected on the corresponding real world objects when the virtual images are viewed by an operator of the mobile body.

56. (new): The mobility assist device of claim 55, wherein the display signal is further based on a location of the operator of the mobile body.

57. (new): The mobility assist device of claim 54, wherein the object information includes information indicative of locations of first and second boundaries of a road.

58. (new): The mobility assist device of claim 57, wherein the display is configured to generate virtual images of the first and second boundaries of the road based on the display signal such that, when viewed from the perspective of an operator of the mobile body, the virtual images of the first and second boundaries appear to be projected on the corresponding real world first and second boundaries of the road.

59. (new): The mobility assist device of claim 58, wherein the first and second boundaries of the road correspond to right and left lane boundaries of a lane of the road.

60. (new): A method of providing mobility assistance for a mobile body comprising steps of:

- providing a mobile body configured for travel over a surface;

- providing a mobility assist device comprising:

- a location system;

- a data storage system containing object information indicative of locations of real world objects;

- a controller; and

- a display attached to the mobile body;

- generating a location signal using the location system that is indicative of a location of the mobile body;

- generating a display signal using the controller based on the object information, the location signal and at least one of a location of an operator of the mobile body and a location of the display; and

- displaying virtual images on the display that are representative of the real world objects based on the display signal.

61. (new): The mobility assist device of claim 60, wherein the displaying step further comprises displaying the virtual images in such a manner as to generate a visual effect of the virtual images being projected on the corresponding real world objects when the virtual images are viewed by an operator of the mobile body, based on the display signal.

62. (new): The mobility assist device of claim 60, wherein:
the object information includes information indicative of locations of first and second boundaries of a road; and
the displaying step comprises displaying virtual images of the first and second boundaries of the road such that, when observed from the perspective of the operator, they appear to substantially overlies the corresponding real world first and second boundaries of the road.